

CLAIMS

1. An authentication system comprising:

5 a plurality of receiving terminals for receiving a transaction request from a user;

a mobile communication network for serving a plurality of mobile communication terminals;

a first location memory storage device for storing a location of each of said plurality of terminals;

10 a second location memory storage device for storing a location of each of said plurality of mobile communication terminals;

15 a matching device for obtaining from said first location memory storage device a location of a receiving terminal which has received a transaction request, and for obtaining from said second location memory storage device a location of a mobile communication terminal, transmitting the transaction request, and matching each of said locations; and

20 an authentication device for determining a validity of said transaction request based upon a result obtained by said matching device upon comparing said locations.

2. An authentication system according to Claim 1,

25 wherein said mobile communication terminal carried by the user who has transmitted said transaction request is identified by identification information contained in said transaction request.

3. An authentication system according to Claim 1,

wherein said mobile communication network is a cellular network including a plurality of base stations; and

30 said second location storing device obtains a location of said mobile communication terminal by detecting a base station located near said mobile communication terminal.

4. An authentication system according to Claims 1,

wherein said second location storing device obtains a location of said mobile communication terminal based upon radio waves transmitted from a satellite.

5. An authentication system according to Claim 3 or 4,

wherein the obtaining operation of a location of said mobile communication terminal by said second location storing device is initiated when said user operates said mobile communication terminal.

6. An authentication system according to any one of Claims 1 to 4, wherein said receiving terminal is a communication terminal served by another communication network connected to said mobile communication network; and

wherein, while said matching device is installed in said mobile communication network, said authentication device is installed in said another communication network.

7. An authentication system according to any one of Claims 1 to 4, wherein said receiving terminal is a second mobile communication terminal served by said mobile communication network; and

wherein said first location storing device obtains a location of said receiving terminal for storage by detecting a base station located near said receiving terminal.

8. An authentication system according to any one of Claims 1 to 4,

wherein said receiving terminal is a second mobile communication terminal served by said mobile communication network; and

wherein said first location storing device obtains a location of said receiving terminal for storage based upon radio waves

transmitted from a satellite.

9. An authentication system comprising:

5 a plurality of receiving terminals for receiving a transaction request by reading, from an identification card storing identification information of a user, identification information of the user;

a first location storing device for storing location information of each receiving terminal and identification information of each of said receiving terminals as corresponding to each other;

10 a second location storing device for storing location information of a mobile communication terminal of each user and identification information of each of said user as corresponding to each other;

15 a matching device for matching location information of said receiving terminal with location information of a mobile communication terminal, location information of said receiving terminal being read out as a key which is identification information of an receiving terminal which received said transaction request from said first location memory device read out as a key which is identification information of a user who transmitted said transaction request from said second location memory device;

20 an authentication device for determining authenticity of said user based upon a match result by said matching device.

25 10. An authentication system according to claim 9, it further comprising a database for retaining amount data indicating an amount available for said user in correspondence with said identification information regarding said user;

30 wherein while said mobile communication terminal comprises a memory for storing the identification information regarding said user and a first communication interface for performing communication with said receiving terminal, said receiving terminal comprises a second communication interface for performing radio

communication with said first communication interface of said mobile communication terminal;

said mobile communication terminal transmits said identification information read out from said memory via said first communication interface;

said receiving terminal receives said identification information via said second communication interface and transmits it to said authentication device;

said authentication device determines authenticity of said user by referring to a transaction amount required for said transaction request and amount data stored in said database in correspondence with said received identification information in addition to a match result given by said matching device.

11. An authentication system according to claim 10,

wherein said mobile communication terminal stores amount data denoting an amount available for said user and transmits it together with said identification information read out from said memory via said first communication interface; and

said receiving terminal determines authenticity of said user by referring to a transaction amount required for said transaction request and said amount data transmitted from said mobile communication terminal.

12. An authentication system according to claim 10,

wherein said first communication interface and said second communication interface perform radio communication.

13. An authentication system according to Claim 1,

wherein said mobile communication terminal is a cellular telephone.

14. An authentication system according to Claim 9,

wherein said mobile communication terminal is a cellular telephone.

15. An authentication method for determining authenticity of a user who possesses a mobile communication terminal served in a mobile communication network, the method comprising:

a step of receiving a transaction request from a user at each receiving terminal;

a first location finding step for finding a location of an receiving terminal which has received said transaction request;

a second location finding step for finding a location of a mobile communication terminal which should be possessed by a user who transmitted said transaction request;

a step for matching the location of said receiving terminal found by said first location finding step with the location of said mobile communication terminal found by said second location finding step; and

a step for determining authenticity of a transaction request based upon a result given by said matching step.

16. The authentication method according to Claim 15,

wherein a mobile communication terminal possessed by a user who transmits said transaction request is identified by identification information contained in said transaction request.

17. The authentication method according to claim 15,

wherein said mobile communication network is a cellular network in which a plurality of base stations are placed; and

said second location finding step finds a location of said mobile communication terminal by detecting said mobile station located near said mobile communication terminal.

18. The authentication method according to claim 17, further

comprising a step of receiving an operation to request a location detection of said mobile communication terminal by said user at said mobile communication terminal;

wherein said step for finding a location of said mobile communication terminal is initiated by reception of said operation.

19. An authentication method for determining authenticity of a user who possesses a mobile communication terminal served in a mobile communication network, comprising: a step of receiving a transaction request at each receiving terminal by reading out identification information of this user from an ID card in which identification information of a user is stored;

a step of reading out location information of this receiving terminal based upon a key which is identification information of an receiving terminal which has received said transaction request from data which identification information of each receiving terminal has stored in relation to location information of said each receiving terminal beforehand;

a step of reading out location information of a mobile communication terminal which this user should possess based upon a key which is identification information of a user who has transmitted said transaction request from data in which identification information of each user has been stored in relation to location information of a mobile communication terminal beforehand;

a step of matching said location information of receiving terminal which was read out with said location information of a mobile communication terminal which was read out;

an authentication step of determining authenticity of said user based upon a result of said match.

20. The authentication method according to claim 19, further comprising:

a step of storing amount data indicating an amount available

for said user in correspondence with said identification information on said user beforehand;

a step of transmitting in which said mobile communication terminal transmits identification information regarding said user to said receiving terminal;

a step of receiving in which said receiving terminal receives said identification information which was transmitted; and

wherein said authentication step determines authenticity of said user by referring to a transaction amount required for said transaction request and said amount data which is stored in correspondence with said identification information received by said receiving terminal in addition to said match result.

21. An authentication program for determining authenticity of transaction request by a user who possesses a mobile communication terminal served in a mobile communication network wherein a computer prompts the program to execute;

a first process of location finding for finding a location of said each receiving terminal which has received said transaction request when each receiving terminal has received a transaction request of a user;

a second location finding process for finding a location of a mobile communication terminal which a user who transmitted said transaction request should possess;

a match process for matching a location of said receiving terminal which was found by said first location finding process with a location of said mobile communication terminal found by said second location finding process; and

an authentication process for determining authenticity of said user based upon said match result.

22. An authentication program for determining authenticity of transaction by a user who possesses a mobile communication terminal

served in a mobile communication network wherein a computer prompts the program to execute;

5 a process of reading out location information of this receiving terminal based upon a key which is identification information of an receiving terminal which has received said transaction request from data in which identification information of said each receiving terminal has been stored in correspondence with location information of said each receiving terminal beforehand when identification information of said each receiving terminal and said user have been
10 obtained after each receiving terminal has received a transaction request from a user;

15 a process of reading out location information of a mobile communication terminal which this user should possess based upon a key which is identification information of a user who transmitted said transaction request from data in which identification information of each user has been stored in correspondence with location information of a mobile communication terminal beforehand;

20 a process for matching said location information of receiving terminal which was read out with said location information of a mobile communication terminal which was read out;

authentication process for determining authenticity of said user based upon said match result.

23. A computer-readable recording media storing the program
25 claimed in Claim 21 or 22.